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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/488,752	01/21/2000	S. Paul Tucker	10991620.1	4859

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Intellectual Property Administration
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EXAMINER
NGUYEN, PHU K

ART UNIT	PAPER NUMBER
2671	11

DATE MAILED: 09/24/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/488,752	TUCKER ET AL.	
	Examiner	Art Unit	
	Phu K. Nguyen	2671	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____ .

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-10* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-10* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

PHU K. NGUYEN
PRIMARY EXAMINER

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other:

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lawless et al. (5,371,514) in view of Kim et al. (5,355,443).

As per claim 1, Lawless teaches the claimed "display system" comprising:

"a memory, containing graphics data, divided into logical regions" (Lawless, column 5, lines 22-48); and

"an attribute system, connected to said memory wherein said attribute system selects graphics data from fewer than all of said logical regions and transmits said graphics data to a display" (Lawless, column 6, lines 3-31).

It is noted that Lawless does not explicitly teach the "frame buffer attribute data" as claimed. However, Kim teaches that such frame attribute for the arrangement of stored data in the buffer is well known (Kim, column 18, lines 24-46). Thus, it would have been obvious to a person of ordinary skill in the art at the time the invention was made, in view of the teaching of Kim, to configure Lawless' system as clamed because the arrangement of different portions of the frame data in Lawless (e.g., figure 8) can be used to defines "frame buffer attribute" for the arrangement of stored data in the buffer as claimed.

Applicant's arguments filed June 30, 2003 have been fully considered but they are not deemed to be persuasive. Applicant argues that "an attribute system that selects graphics data from fewer than all of said logical regions based on said attribute data are distinguished from the cited references" which is not correct. Kim's selected regions "of which frame buffers will be displayed on the video monitor and any overlay that will be displayed" (column 18, lines 44-46) shows the frame buffer attribute data which allows the selection of graphics data from fewer than all of said logical regions.

Claim 2 adds into claim 1 the store of graphics data and frame attribute data in separate physical memories which Kim teaches in figure 8 and Lawless suggests in figures 3 and 8.

As per claim 3 Lawless teaches the claimed "display system" comprising:

"a memory, containing graphics data, divided into logical regions" (Lawless, column 5, lines 22-48); and

"a regions system, that calculates which regions of said graphics data contain data necessary for display of a block of pixels; wherein said regions are fewer than all of said logical regions" (Lawless, column 6, lines 3-31).

It is noted that Lawless does not explicitly teach the "frame buffer attribute data" as claimed. However, Kim teaches that such frame attribute for the arrangement of stored data in the buffer is well known (Kim, column 18, lines 24-46). Thus, it would have been obvious to a person of ordinary skill in the art at the time the invention was

made, in view of the teaching of Kim, to configure Lawless' system as clamed because the arrangement of different portions of the frame data in Lawless (e.g., figure 8) can be used to defines "frame buffer attribute" for the arrangement of stored data in the buffer as claimed.

Claim 4 adds into claim 3 the store of graphics data and frame attribute data in physically separate memories which Kim teaches in figure 8 and Lawless suggests in figures 3 and 8.

Claim 5 adds into claim 3 "wherein said regions system sends identities of said regions to a screen refresh unit; and wherein said screen refresh unit, calculates memory addresses from said identities and sends selected graphics data from said memory to a display" which Lawless teaches in column 11, lines 34-49.

Claim 6 adds into claim 5 "said logical regions further comprising memory to store graphics data for each pixel of a monitor" which Kim teaches in figure 8 and Lawless suggests in figures 3 and 8.

As per claim 7, Lawless teaches the claimed "method for selectively reading pixel data from a frame buffer memory array" comprising:

"defining a plurality of regions of frame buffer memory, wherein each region comprises memory to store graphics data for each pixel of a monitor" (Lawless, column 5, lines 22-48); and

"calculating a subset of said regions of frame buffer memory that are required to display said pixel on said monitor; and retrieving from said frame buffer memory pixel data only from said subset of regions of frame buffer memory that are required to display said pixel on said monitor" (Lawless, column 6, lines 3-31).

It is noted that Lawless does not explicitly teach the "storing attribute data for each pixel in a memory, wherein said attribute data encodes which of said regions are to be displayed on said monitor; retrieving said attribute data for a pixel from said memory" as claimed. However, Kim teaches that such pixel attribute for the arrangement of stored data in the buffer is well known (Kim, column 18, lines 24-46). Thus, it would have been obvious to a person of ordinary skill in the art at the time the invention was made, in view of the teaching of Kim, to configure Lawless' system as clamed because the arrangement of different portions of the frame data in Lawless (e.g., figure 8) can be used to defines "attribute data encodes which of said regions are to be displayed on said monitor" for the arrangement of stored data in the buffer as claimed.

Claim 8 adds into claim 7 "wherein said graphics data and said attribute data are stored in said frame buffer memory" which Kim teaches in figure 8 and Lawless suggests in figures 3 and 8.

As per claim 9, Lawless teaches the claimed "method for selectively reading pixel data from a frame buffer memory array" comprising:

"defining a plurality of regions of frame buffer memory, each region further comprising memory to store graphics data for each pixel of a monitor" (Lawless, column 5, lines 22-48); and

"calculating a subset of said regions of frame buffer memory that are required to display said tile on said monitor; and retrieving from said frame buffer memory pixel data only from said subset of regions of frame buffer memory that are required to display said tile on said monitor" (Lawless, column 6, lines 3-31).

It is noted that Lawless does not explicitly teach the "storing attribute data for each pixel in a memory, encoding which of said regions are to be displayed on said monitor using the attribute data; defining groups of pixels as tiles; selecting a tile for display on said monitor; retrieving said attribute data for said tile from said memory" as claimed. However, Kim teaches that such pixel attribute for the arrangement of stored data in the buffer is well known (Kim, column 18, lines 24-46). Thus, it would have been obvious to a person of ordinary skill in the art at the time the invention was made, in view of the teaching of Kim, to configure Lawless' system as clamed because the arrangement of different portions of the frame data in Lawless (e.g., figure 8) can be used to defines "attribute data encodes which of said regions are to be displayed on said monitor" for the arrangement of stored data in the buffer as claimed.

Claim 10 adds into claim 9 "wherein said graphics data and said attribute data are stored in said frame buffer memory" which Kim teaches in figure 8 and Lawless suggests in figures 3 and 8.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Phu K. Nguyen whose telephone number is (703)305 - 9796. The examiner can normally be reached on M-F 8:00-4:30.

The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)305-3800.

Phu K. Nguyen
September 20, 2003

PHU K. NGUYEN
PRIMARY EXAMINER
GROUP 2600